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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,580	12/20/2000	Wilson Wai Shun Chan	50277-0410	1588

29989 7590 02/28/2005

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EXAMINER

PHAM, KHANH B

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,580

Applicant(s)

SHUN CHAN ET AL.

Examiner

Khanh B. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/19, 9/23 12/02, 12/30 2004</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Preliminary Amendment

1. The preliminary amendment filed December 20, 2000 has been entered. Claims 1, 3, 5, 11-13, 15, 17, and 26 have been amended.

Specification

2. The disclosure is objected to because pages 23-24 of the specification, which included claims 22-26, are missing. However, this Office Action is based on the Preliminary Amendment filed December 20, 2000. The examiner presumes that the claim listing presented in the Preliminary Amendment filed on the same date is the same as original filed claims. Applicant is advised to submit substitute copies of pages 23-24 of the specification as a separate paper in respond to this Office Action to complete the file record.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6, 8-13, 15-26 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 1-6, 8-13, the languages of the claims raise a question as to whether the claims are directed merely to an abstract idea that is not tied to a

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technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C 101. Claims 1-6, 8-13 recite the steps for managing access to a resource and do not transform any physical subject matter, tangible or intangible into a different state or thing and, therefore, do not fall within the definition of a statutory "process" or within the meaning of "technology." For example, if the "resource" in the claims is interpreted as a meeting room, the entities are humans, "exclusive lock" is the exclusive right to use the meeting room and "share lock" is the right to use a portion of the meeting room, then the whole process as claimed can be performed manually by a human, without the use of a machine or a general purpose computer. The fact that a claimed method is not tied to a machine, even if the method could be performed by a machine, and that it does not recite a transformation of physical subject matter to a different state or thing, is an indication that the method is a disembodied "abstract idea" and is not a practical application, as broadly claimed.

Claims 15-26 are directed to "a computer readable medium", which could be interpreted as product claims. However, the specification at page 14, lines 11-18 provides the definition for "computer-readable medium" to include "light waves", "radio-wave" and "infra-red", which are intangible medium. Claims 15-26 are therefore rejected under 35 U.S.C. 101 as being intangible subject matter.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-26 are rejected under 35 U.S.C. 102(b)** as being anticipated by Rahm (“Concurrency and Coherency Control in Database Sharing System”), hereinafter “Rahm”.

As per claims 1, 15, Rahm teaches a method for managing access to a resource that is accessible to a plurality of entities, the method comprising the steps of:

- “for each entity of said plurality of entities, maintaining, local to said entity, data that indicates whether any other entity of said plurality of entities has an exclusive lock on said resource” at Fig. 3, page 17;

(Rahm teaches at Fig. 3 that each node P1, P2, P3 has a LLM (i.e., “Local Lock Manager”). LLM2, for example, maintains data indicates that node P2 has a write lock (i.e., exclusive lock) on object O1.)

- “for each entity of said plurality of entities that seeks to acquire a shared lock, performing the steps of checking the data that is local to the entity”; if the data indicates that an exclusive lock has not been granted to any of the other entities of said plurality of entities, then the entity acquiring said shared lock without

receiving a lock grant from a resource master of said resource" at page 16,
section 3.1.2 and page 19, Table 1;

(Rahm teaches that the LLMs process lock requests and releases locally "without communicating with the GLM". At table 1, Rahm teaches that read lock request (i.e., Shared lock) is granted locally at LLM.)

- "if the data indicates that an exclusive lock has been granted to any of the other entities of the plurality of entities, then the entity acquiring said shared lock only after said exclusive lock is released by the entity that has been holding said exclusive lock" at page 18, 1st paragraph and page 19, Table 1.

(Rahm teaches that a lock request for O1 in node P1 requires revocation of the write authorization form P2 by sending messages to GLM and P2)

As per claims 2, 16, Rahm teaches the method and computer readable medium of claims 1, 15 wherein "the entity acquires said shared lock without communication with the resource master of the resource" at page 16, last paragraph.

As per claims 3, 17, Rahm teaches the method and computer readable medium of Claims 1, 15, wherein "the step of the entity acquiring said shared lock only after the exclusive lock is released is performed by the step of repeatedly checking the data that is local to the entity until that data indicates that the exclusive lock has been released by the entity that has been holding the exclusive lock" at page 18, 1st paragraph.

As per claims 4, 18, Rahm teaches the method and computer readable medium of Claims 1, 15, wherein "the step of the entity acquiring said shared lock only after the

exclusive lock is released is performed after a step of receiving a message from the resource manager notifying that the entity is allowed to acquire said shared lock” at page 18, 1st paragraph.

As per claims 5, 19, Rahm teaches the method and computer readable medium of Claims 1, 15, “upon the exclusive lock being released by the entity that has been holding the exclusive lock, performing the step of updating each data of the plurality of entities to reflect that none of the plurality of entities is holding an exclusive lock” at page 18, 1st paragraph and page 19, table 1.

As per claims 6, 20, Rahm teaches the method and computer readable medium of Claims 5, 19, wherein “the step of updating is initiated by the resource manager that broadcasts messages to the plurality of entities for each entity of the plurality of entities to modify the data corresponding to the each entity” at page 18, 1st paragraph.

As per claims 7, 21, Rahm teaches the method and computer readable medium of Claims 1, 15, wherein “an entity of said plurality of entities is a database server” at page 19, last paragraph.

As per claims 8, 22, Rahm teaches a method and computer readable medium for managing access to a resource that is accessible to a plurality of entities, the method comprising the steps of:

- “for each entity of said plurality of entities, maintaining, local to said entity, data that indicates whether any other entity of said plurality of entities has an exclusive lock on said resource” at page 17, Fig. 3;

(Rahm teaches at Fig. 3 that each node P1, P2, P3 has a LLM (i.e., “Local Lock Manager”). LLM2, for example, maintains data

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indicates that node P2 has a write lock (i.e., exclusive lock) on object O1.)

- “for each entity of the plurality of entities that seeks to acquire an exclusive lock, performing the steps of requesting, from a resource manager, said exclusive lock for said entity” at page 18, 1st paragraph;

(Rahm teaches that a write lock request for O2 in P2 must be delayed and a requesting message is sent to the GLM.)

- “wherein said resource manager manages access to said resource; if no conflicting lock is being held by any other entity of the plurality of entities, then said entity acquiring said exclusive lock” at page 18, 1st paragraph;

(Rahm teaches that the write lock request for O2 in P2 is granted after the read authorization in P1 and P3 are released)

- “updating the data of the plurality of entities to reflect that an exclusive lock is being held by one of the plurality of entities” at page 18 and page 19, Table 1.

(Rahm teaches that Local lock state at LLM are changed to reflect the status of the locks, including the exclusive lock (i.e., “WA”, or Write lock))

As per claims 9, 23, Rahm teaches the method and computer readable medium of Claims 8, 22 wherein, “upon recognizing that no conflicting lock is being held by any of the entity of the plurality of entities, then the resource manager allowing the entity that seeks to acquire an exclusive lock to acquire that exclusive lock” at page 18 and page 19, Table 1.

As per claims 10, 24, Rahm teaches the method and computer readable medium of Claims 8, 22, wherein, "if an exclusive lock is being held by any entity of the plurality of entities, then indicating to the entity that is holding said exclusive lock that another entity of the plurality of entities is waiting for a lock" at page 18, 1st paragraph.

As per claim 11, Rahm teaches the method of Claim 10, wherein, "upon said exclusive lock is being released by the entity that is holding said exclusive lock, indicating to the resource manager that said exclusive lock has been released by the entity that is holding said exclusive lock" at page 18, 1st paragraph.

As per claims 12, 25, Rahm teaches the method and computer readable medium of Claims 8, 22, wherein, "if a shared lock is being held by any entity of the plurality of entities, then indicating to all entities that are holding a shared lock that an entity of the plurality of entities is waiting for an exclusive lock" at page 18, 1st paragraph and page 19, Table 1.

As per claim 13, 26, Rahm teaches the method of Claim 12, 22, wherein "each entity of all entities that is holding a shared lock, upon releasing said shared lock, indicates to said resource manager that the corresponding shared lock that is held by that entity has been released" at page 18.

As per claim 14, Rahm the method of Claim 8 wherein "an entity of the plurality of entities is a database server" at page 19, last paragraph.

Conclusion

6. The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is **(571) 272-3574** for faster service. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh B. Pham whose telephone number is (571) 272-4116. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Khanh B. Pham
Examiner
Art Unit 2167



KBP
February 22, 2005